FIG. 1

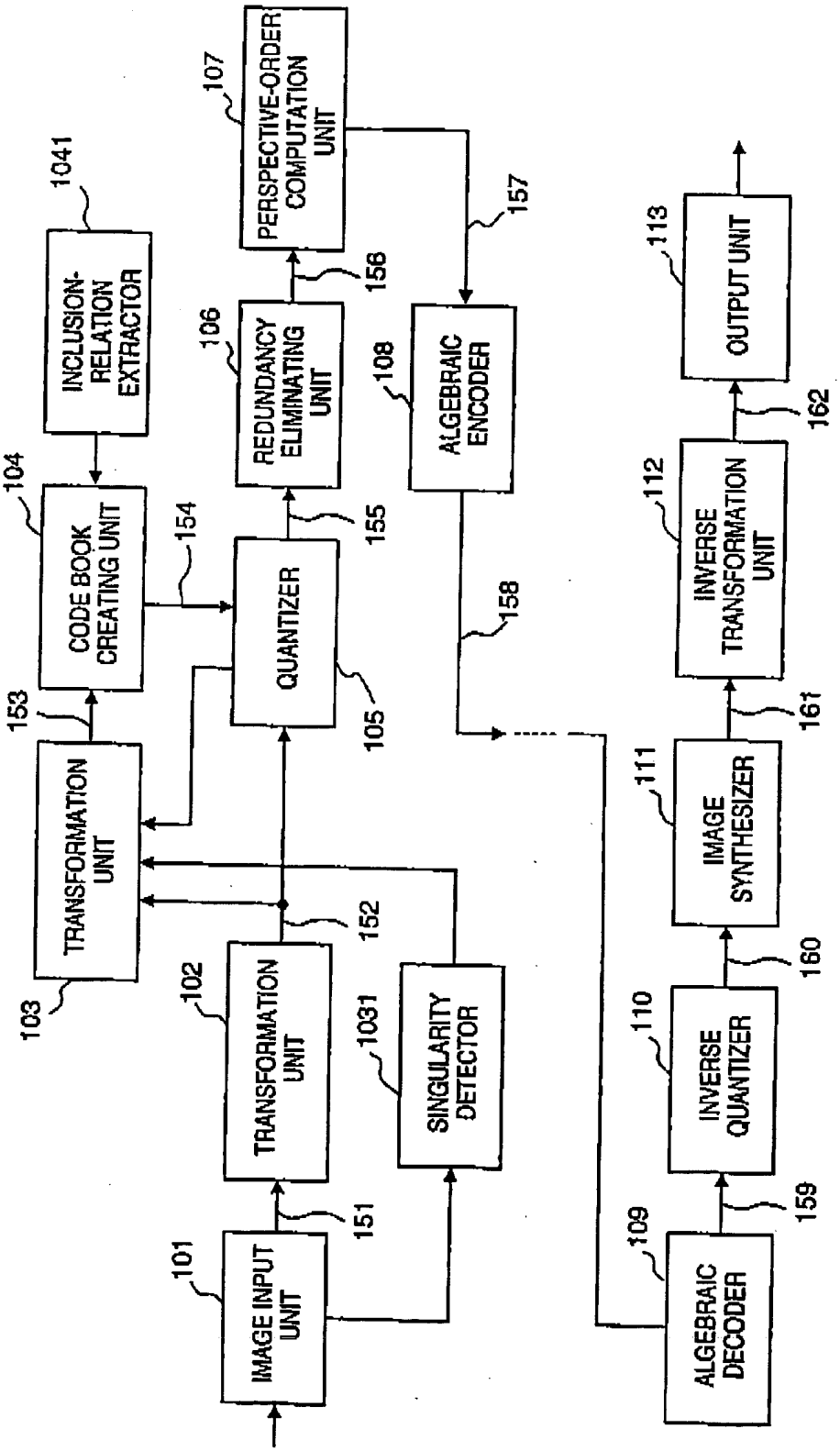


IMAGE INPUT UNIT
101
TRANSFORMATION UNIT
102
SINGULARITY DETECTOR
1031
TRANSFORMATION UNIT
103
CODE BOOK CREATING UNIT
104
INCLUSION-RELATION EXTRACTOR
1041
QUANTIZER
105
REDUNDANCY ELIMINATING UNIT
106
PERSPECTIVE-ORDER COMPUTATION UNIT
107
ALGEBRAIC ENCODER
108
ALGEBRAIC DECODER
109
INVERSE QUANTIZER
110
IMAGE SYNTHESIZER
111
INVERSE TRANSFORMATION UNIT
112
OUTPUT UNIT
113
151
152
153
154
155
156
157
158
159
160
161
162

FIG. 2

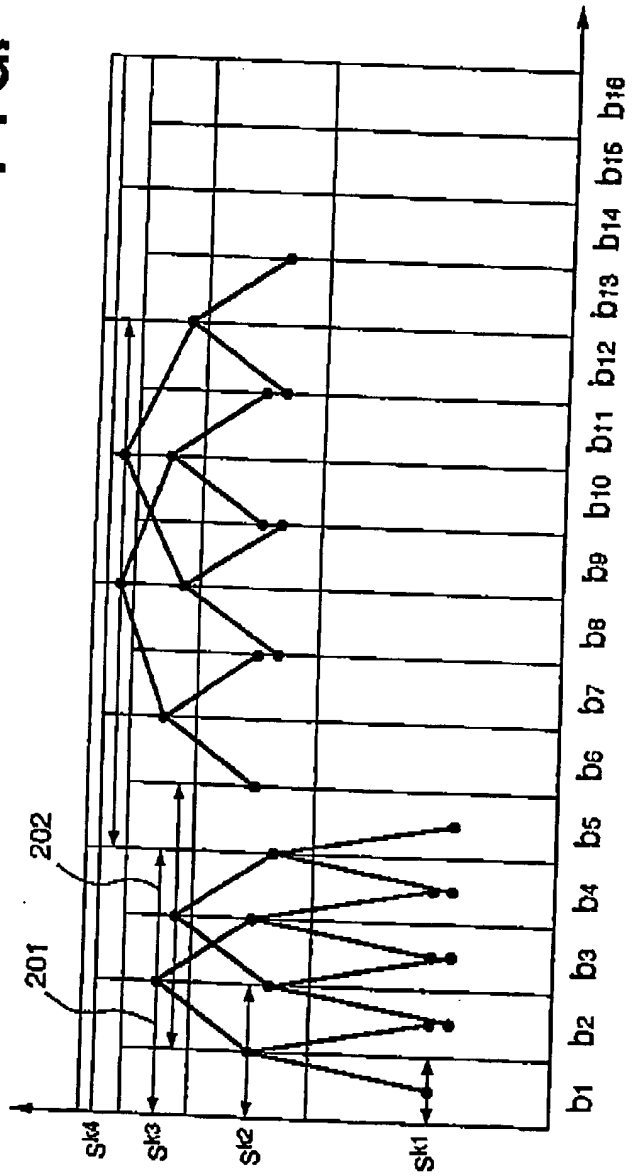

b1
b2
b3
b4
b5
b6
b7
b8
b9
b10
b11
b12
b13
b14
b15
b16
202
201
Sk4
Sk3
Sk2
Sk1

FIG. 3

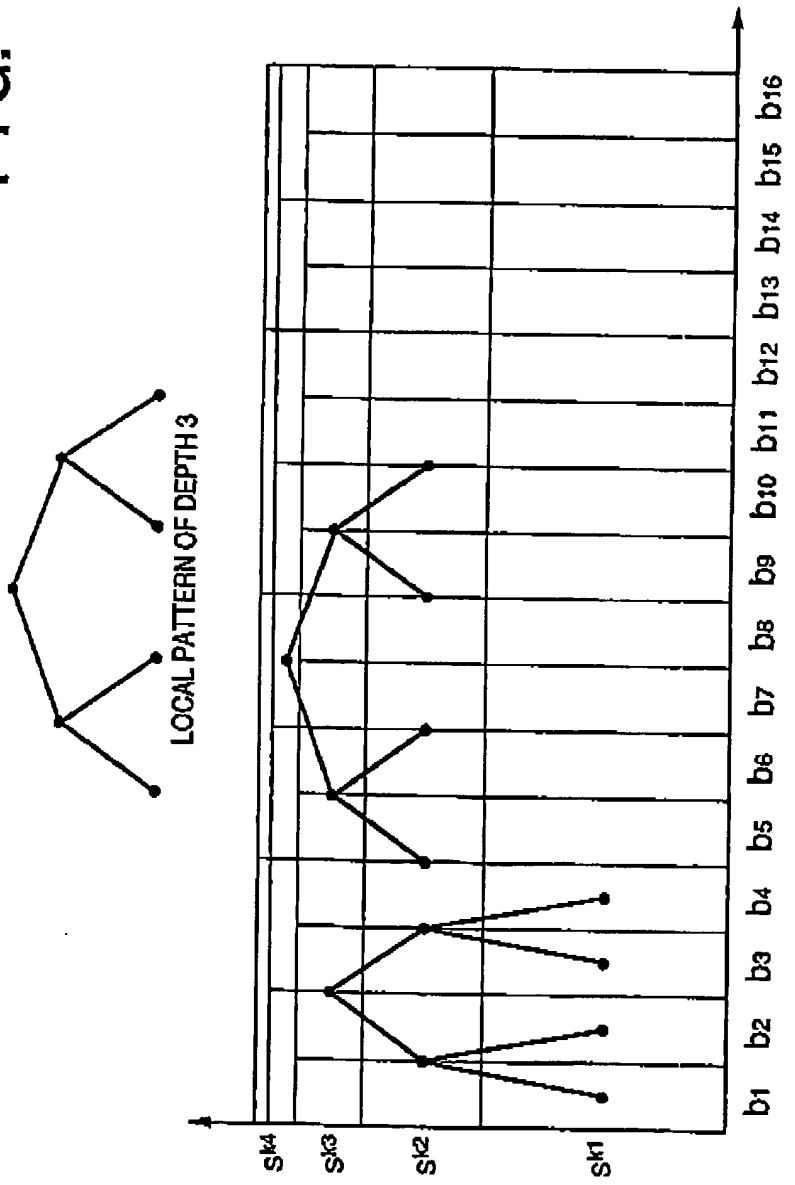

LOCAL PATTERN OF DEPTH 3
b1
b2
b3
b4
b5
b6
b7
b8
b9
b10
b11
b12
b13
b14
b15
b16
Sk4
Sk3
Sk2
Sk1

FIG. 4

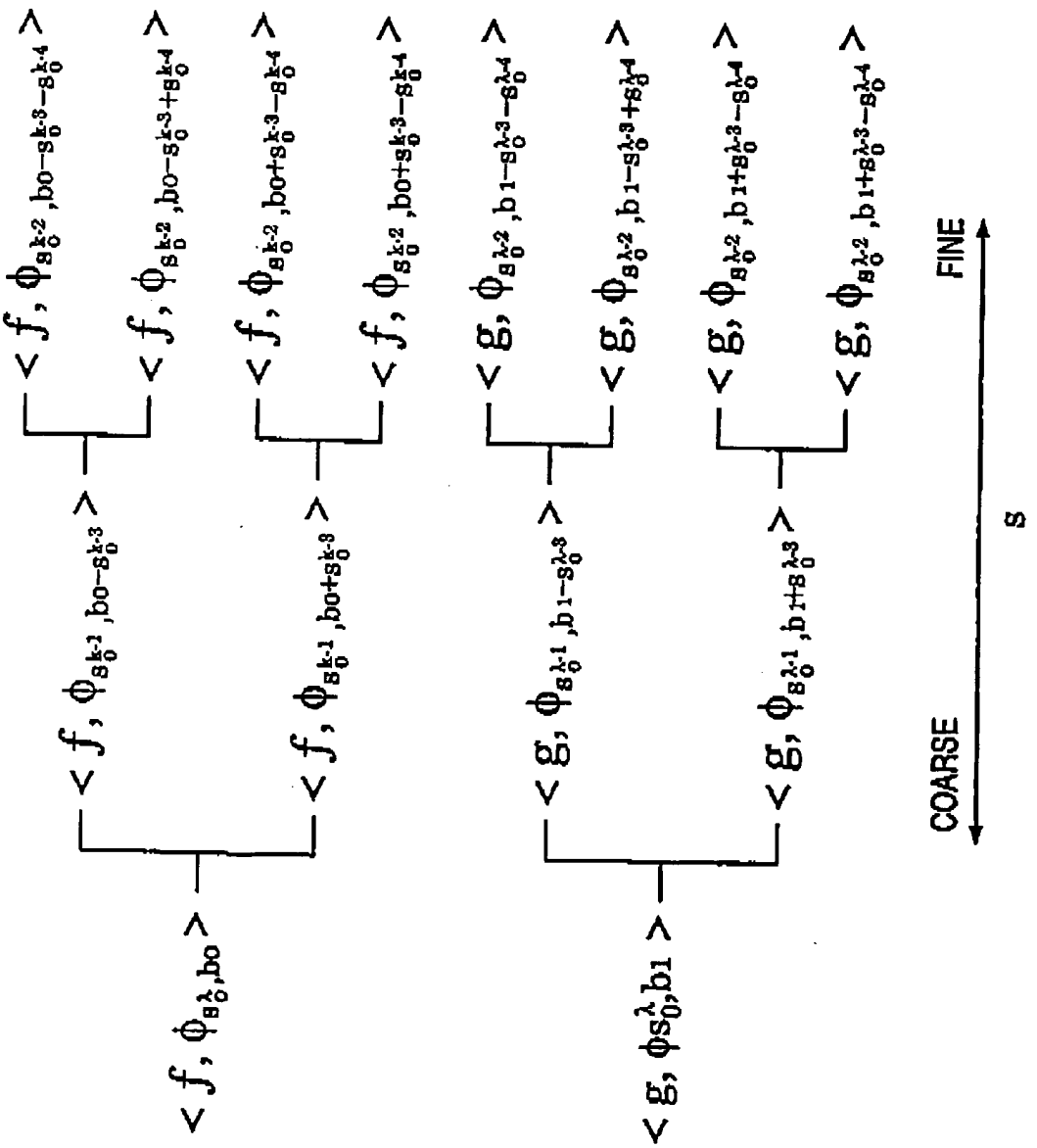


FIG. 5

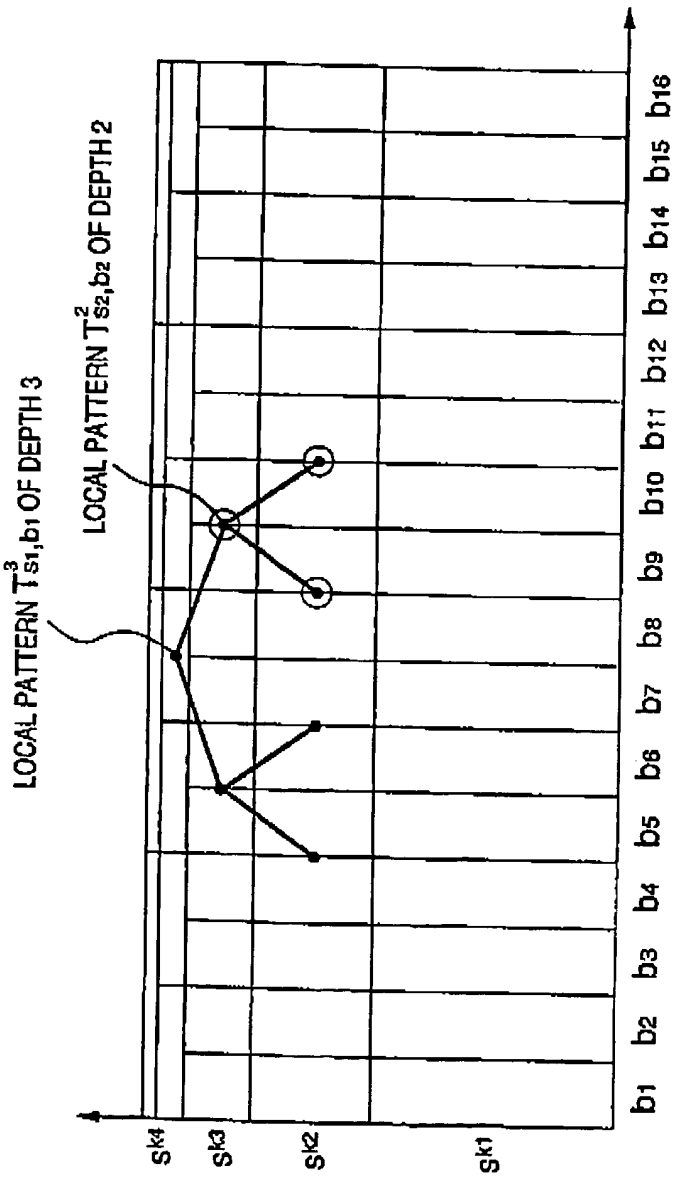

LOCAL PATTERN $T^3_{s1,b1}$ OF DEPTH 3
LOCAL PATTERN $T^2_{s2,b2}$ OF DEPTH 2
b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
sk4 sk3 sk2 sk1

FIG. 6

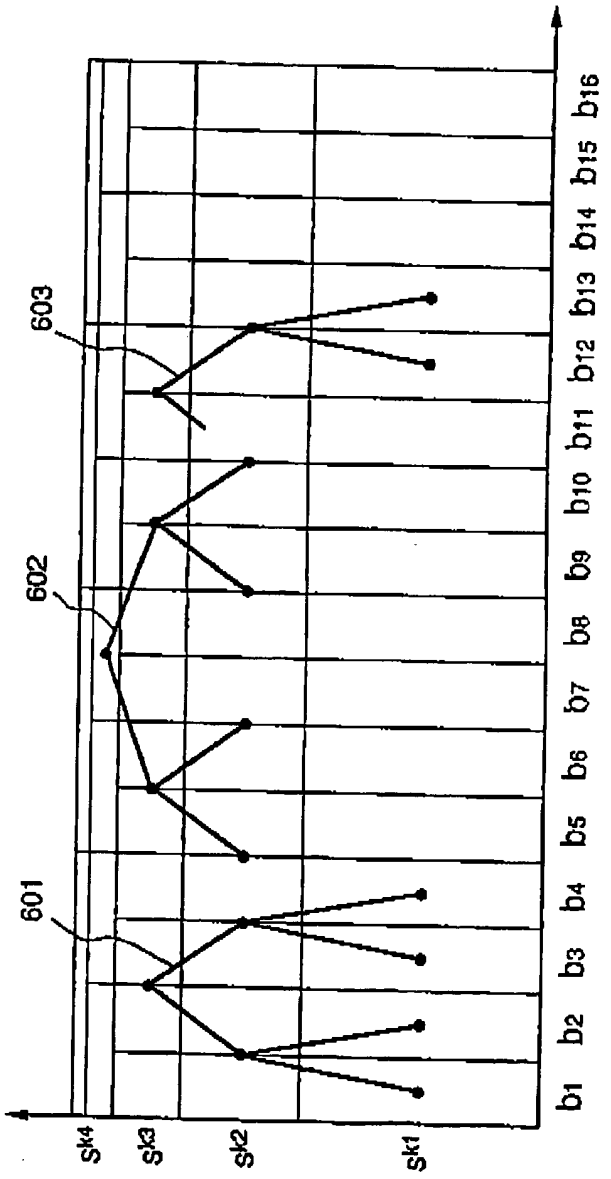

603
602
601
b1 b2 b3 b4 b5 b6 b7 b8 b9 b10 b11 b12 b13 b14 b15 b16
Sk4 Sk3 Sk2 Sk1

FIG. 7

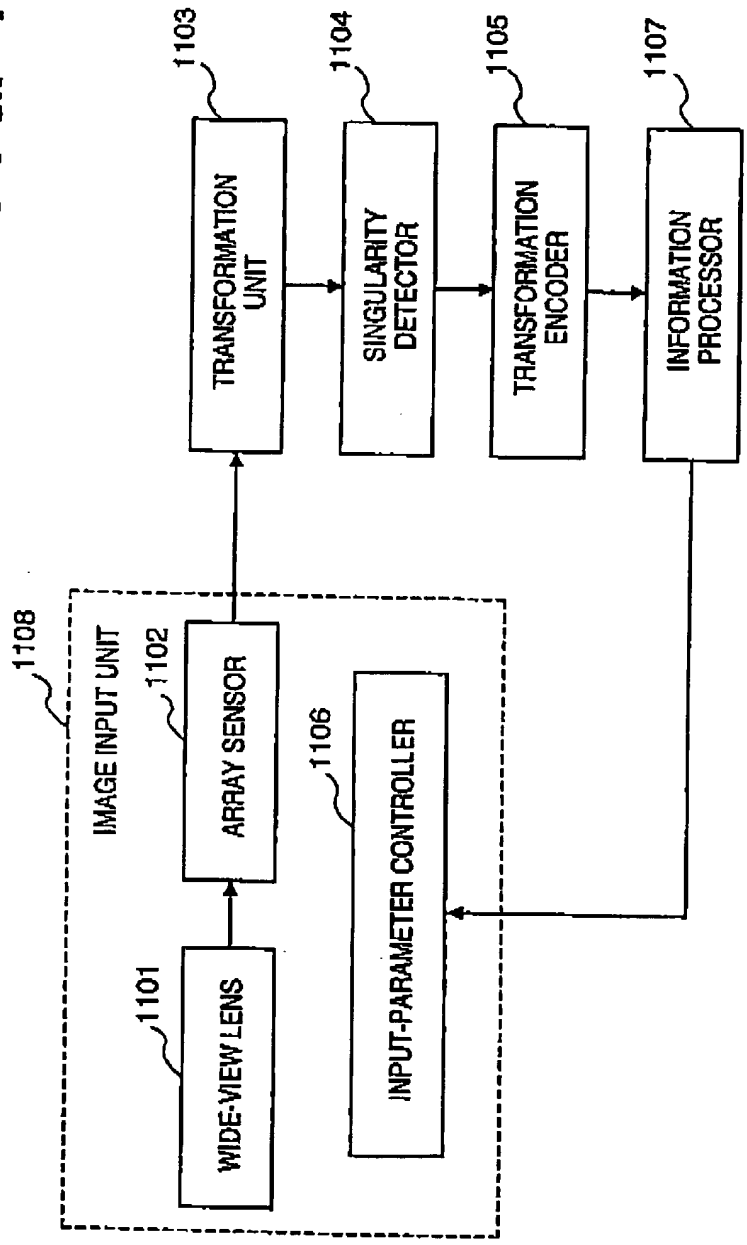

1103
1104
1105
1107
TRANSFORMATION UNIT
SINGULARITY DETECTOR
TRANSFORMATION ENCODER
INFORMATION PROCESSOR
1108
IMAGE INPUT UNIT
1102
ARRAY SENSOR
1106
INPUT-PARAMETER CONTROLLER
1101
WIDE-VIEW LENS

FIG. 8

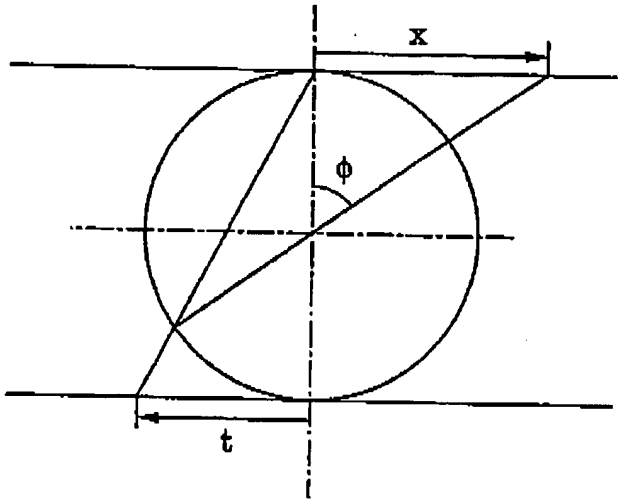
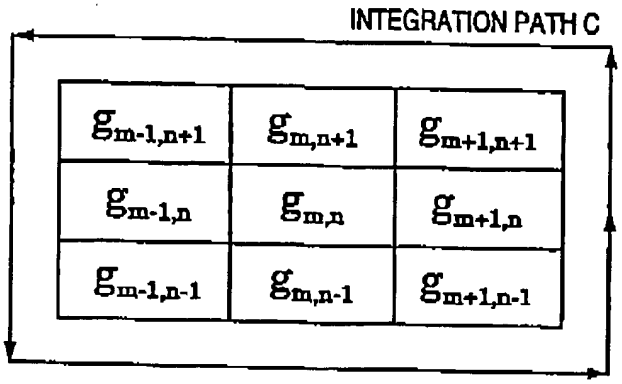

x
ϕ
t

FIG. 9


INTEGRATION PATH C
$g_{m-1,n+1}$
$g_{m,n+1}$
$g_{m+1,n+1}$
$g_{m-1,n}$
$g_{m,n}$
$g_{m+1,n}$
$g_{m-1,n-1}$
$g_{m,n-1}$
$g_{m+1,n-1}$

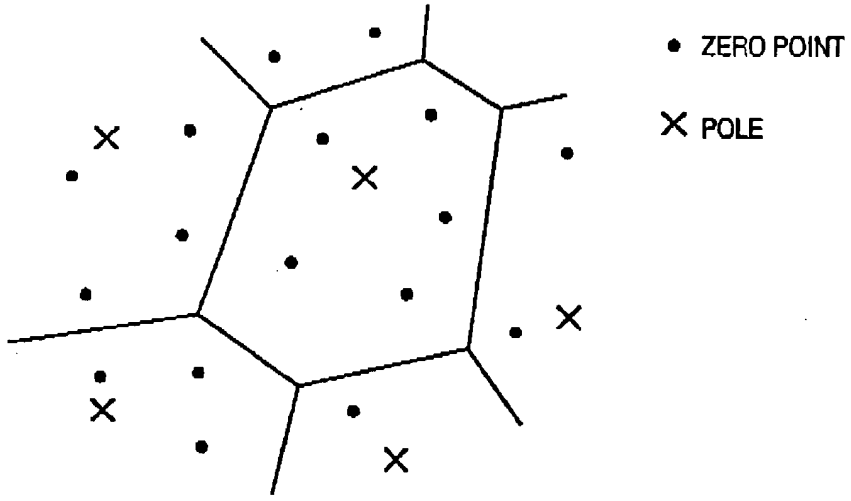



FIG. 10